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IN THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (currently amended) A method of streaming content via a distribution network to any at least one access network of a plurality of heterogeneous access networks, comprising:

retrieving from a local streaming server, content encapsulated according to an Internet Protocol (IP) packet structure;

encapsulating said content in an Internet Protocol (IP) packet;

processing, at said local streaming server, said retrieved content into a format native to an access network from which a user request originated; and

streaming said IP packet containing said content processed content to said access network via said a distribution network, said distribution network format being different than said access network formats coupled to said plurality of heterogeneous access networks.

2. (currently amended) The method of claim 1, further comprising encapsulating said content according to the steps of: wherein said encapsulating step comprises:

preprocessing said content into at least one packet having a format and size optimized for storage and retrieval at said a local streaming server;

encapsulating said at least one packet of content in a payload portion of a real time transport protocol (RTP) packet; and

encapsulating said RTP packet in a payload portion of said IP packet structure.

3. (original) The method of claim 2 further comprising formatting said content to support playback at a quality of service (QoS) corresponding to said at least one access network.

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4.   (currently amended) The method of claim 2 further comprising the step of storing said encapsulated content in said IP packet <u>structure</u> on a storage medium coupled to said local streaming server.

5.   (original) The method of claim 4 further comprising the step of retrieving said content from said local streaming server in response to a user request from said at least one access network.

6.   (original) The method of claim 5 further comprising the step of retrieving said content from a remote stream server that is remotely located from said local stream server in an instance where said content is unavailable from said local stream server.

7.   (original) The method of claim 6 further comprising the step of storing said retrieved content from said remote stream server on said storage medium coupled to said local stream server in an instance where a predefined user request threshold has been exceeded.

8.   (original) The method of claim 1 wherein said streaming step comprises streaming said content in real time.

9.   (original) The method of claim 2 wherein said preprocessing step further comprises transcoding said content into at least one packet format selected from the group of packet formats comprising MPEG-1, MPEG-2, MPEG-4, AVI, MJPEG, QUICKTIME™, MP3, REAL NETWORKS™, REAL VIDEO™, REAL AUDIO™, and MICROSOFT™ media player, wherein said transcoding occurs prior to storage on a local stream server.

10.   (original) The method of claim 9 wherein said preprocessing step further comprises storing said content in said at least one of said packet formats from said group at said local stream server.

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11.   (currently amended) The method of claim 1 wherein said processing step further comprises:

~~retrieving said IP packet having said encapsulated content from a local storage device;~~

transcoding said content into at least one packet format selected from the group of packet formats comprising MPEG-1, MPEG-2, MPEG-4, AVI, MJPEG, QUICKTIME™, MP3, REAL NETWORKS™, REAL VIDEO™, REAL AUDIO™, and MICROSOFT™ media player, wherein said transcoding occurs after storage.

12.   (previously presented) The method of claim 11 wherein said transcoding step comprises:

separating said IP packet into a header portion and a payload portion encapsulating said at least one packet of content;

converting said at least one packet of content into a format supported by said access network; and

packetizing said header portion and said converted at least one packet of content into said IP packet.

13.   (original) The method of claim 1 wherein said at least one access network is selected from the group comprising a wide area network, a local area network, a cable network, a carrier network, a satellite network, a terrestrial network, wireless network, and an internet network.

14.   (original) The method of claim 1 further comprising extracting said content from said IP packet downstream of said distribution network.

15.   (original) The method of claim 1 further comprising transmitting said content from said at least one access network to subscriber equipment of a requester for said content.

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16.   (original) The method of claim 1 wherein said at least one access network comprises a plurality of non-homogeneous access networks.

17.   (currently amended) An apparatus providing scalable streaming of content to at least one access network of a plurality of heterogeneous access networks associated with an interactive information distribution system, said apparatus comprising:

at least one stream caching server for streaming said content as an Internet Protocol (IP) packet to said at least one access network via a stream distribution network in response to a request for content, said content being encapsulated within said IP packet; and

a packet processor coupled to said at least one stream caching server for processing said encapsulated content within said IP packets into at least one packet in a format native to said at least one access network of said plurality of heterogeneous access networks prior to streaming said IP packet to said at least one access network via said stream-distribution network, wherein the format of said distribution system is different than the formats of said access networks.

18.   (original) The apparatus of claim 17 wherein said at least one access network comprises a plurality of non-homogeneous access networks.

19.   (original) The apparatus of claim 17 wherein each said IP packet further comprises said content encapsulated in a payload portion of a Realtime Transport Protocol (RTP) packet and said RTP packet encapsulated in a payload portion of said IP packet.

20.   (original) The apparatus of claim 19 wherein said content is stored as said IP packets on at least one storage medium respectively coupled to said at least one stream caching server.

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21. (original) The apparatus of claim 17 wherein said at least one stream caching server comprises a local stream caching server coupled to at least one remote stream caching server via said stream distribution network.

22. (original) The apparatus of claim 21 wherein said at least one remote stream caching server streams said content to an access network in response to said request for content in an instance said requested content is unavailable from said local caching server.

23. (original) The apparatus of claim 17 wherein said content is formatted to support playback at a quality of service (QoS) corresponding to said at least one access network.

24. (original) The apparatus of claim 17 wherein said packet processor transcodes said content into at least one packet selected from the group of packet formats comprising MPEG-1, MPEG-2, MPEG-4, AVI, MJPEG, QUICKTIME™, MP3, REAL NETWORKS™, REAL VIDEO™, REAL AUDIO™, and MICROSOFT™ media player.

25. (original) The apparatus of claim 24 wherein said transcoded content is stored as said at least one of said packet formats from said group prior to storing said IP packets.

26. (original) The apparatus of claim 24 wherein said content is transcoded as said at least one of said packet formats from said group prior to streaming said IP packets.

27. (original) The data structure of claim 17 wherein a number of content packets in each RTP payload is configured as a read block for transcoding of said content packets into a format supported by said access network.

28. (original) The apparatus of claim 17 wherein said at least one access network further comprises a data link converter for transferring said content to subscriber equipment of a requester for said content.

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29. (original) The apparatus of claim 28 wherein said data link converter extracts said content native to said at least one access network from said IP packet.

30. (original) The apparatus of claim 18 wherein said at least one access network is a network selected from the group comprising a local area network, wide area network, cable network, satellite network, digital subscriber line, wireless network, and a terrestrial network.

31. (original) The apparatus of claim 17 wherein said interactive information distribution system further comprises at least one random access data server coupled to said at least one stream server via said distribution network.

32. (original) The apparatus of claim 31 wherein said at least one random access data server is a server selected from the group comprising an HTTP proxy server for static web pages, an HTTP proxy server for dynamic web pages, a chat server, and an electronic program guide server, an e-mail server.

33. (original) The apparatus of claim 17 wherein said at least stream caching server is a server selected from the group comprising a video-on-demand server, a pay-per-view server, and a digital broadcast server.

34. (canceled)

35. (new) The method of claim 1, wherein:
said distribution network comprises one or more of a synchronous optical network (SONET) and an asynchronous transfer mode (ATM) network.

36. (new) The method of claim 35, wherein:

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said plurality of access networks comprise two or more of a local area network (LAN), a wide area network (WAN), a digital subscriber line (DSL) network and a cable television distribution network.

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